No.



9800142

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE: PRESENTS SHALL COME;

D&FF Jechnology Kolding Company, TEC.

There has been presented to the

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT. THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FIES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR USING IT IN PRODUCING A HYBRID OR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR USING IT IN PRODUCING A HYBRID OR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR USING IT IN PRODUCING A HYBRID OR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR USING IT IN PRODUCING A HYBRID OR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR USING IT IN PRODUCING A HYBRID OR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR USING IT IN PRODUCING A HYBRID OR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR USING IT IN PRODUCING A HYBRID OR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR USING IT IN PRODUCING A HYBRID OR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR USING IT IN PRODUCING A HYBRID OR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR USING IT IN PRODUCING A HYBRID OR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR USING IT IN PRODUCING A HYBRID OR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR USING IT IN PRODUCING A HYBRID OR PROPAGATION, OR STOCKING IT SERVED.

SOYBEAN

'DP 4344 RR'

In Testimonn Microst, I have hereunto set my hand and caused the seal of the Plant Bariety Arotection Office to be affixed at the City of Washington, D.C. this twenty-seventh day of April, in the year two thousand and four.

Altest

Commissioner

Plant Variety Protection Office Agricultural Marketing Service Ambarema Sary of Agriculture U.S. DEPARTMENT OF AGRICULTURE

AGRICULTURAL MARKETING SERVICE

SCIENCE AND TECHNOLOGY DIVISION - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

S&T-470 (6-98) designed by the Plant Variety Protection Office with WordPerfect 6.0a. Replaces STD-470 (03-96) which is obsolete.

The following statements are made in accordance with the Privacy Act of 1974 (5U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

(Instructions and inform	nation collection burden sta	tement on reverse)					
1. NAME OF OWNER			•	2. TEMPORARY DE	SIGNATION OR	3, VA	RIETY NAME
D&PL Technolog	y Holding Corp <i>C</i> (ompany, LLC)/2004 per plicant's authori on/)	EXPERIMENTAL DPX	NAME 3 9743 RR		DP 4344 RR
4. ADDRESS (Street and No., or R.F.D.	. No., City, State, and ZIP C		vn).	5. TELEPHONE (inc	lude area code)		
PO Box 157 100 Main Street				(662	742-4141		NUMBER
Scott, Mississippi 38	772			6. FAX (include area	code)		9800142
USA				(662)	742-3182	FILING	DATE
7. IF THE OWNER IS NOT A "PERSON ORGANIZATION (corporation, partners)		8. IF INCORPORATE STATE OF INCOR	•	9. DATE OF INCOR	PORATION		27 February, 1998
Corporation		Delaware		Februa	ary 29, 1996		
10. NAME AND ADDRESS OF OWNER	R REPRESENTATIVE(S) T	O SERVE IN THIS APPL	LICATION. (First per	son listed will receive all p	apers)	FIL	ING AND EXAMINATION
Delta and Pine Land C Kelly Casavechia P.O. Box 157 Scott, MS 38772	Company					\$ CE	2,450.00 ATE 27 February,19 RTIFICATION FEE: 432
11 TCLEDIJONE (include area code)	10 CAV finallyde area and	a) .	Isa E MAII		114 (CROR KIND (Common Name)
11. TELEPHONE (include area code)	12. FAX (include area cod	e)	13. E_MAIL		14. \	CHOP TOND (Sommon Name,
(000) 740 4444	(000) 74	2 2402	leather to ann		ine com		Soybean
(662) 742-4141 15. GENUS AND SPECIES NAME OF C	(662) 74 CROP		NAME (Botanical)	avechia@deltaandp		IS THE VARIE	TY A FIRST GENERATION
					1	HYBRID?	
Glycine	<u>Max</u>		Leguminosae			YE	s XNO
18. CHECK APPROPRIATE BOX FOR I	EACH ATTACHMENT SUE	MITTED (Follow instruc					BE SOLD AS A CLASS OF
reverse). a. x Exhibit A. Origin and Breedir	ng History of the Variety		CER	TIFIED SEED? (See Sec	tion 83(a) of the Plant	t variety Prote	ction Act)
b. x Exhibit B. Statement of Distin				YES (If "yes", answer	items 20	X NO (If	"no", go to item 22)
c. x Exhibit C. Objective Descript d. x Exhibit D. Additional Descrip	-	n ·	20. DOE	and 21 below) S THE OWNER SPECIFY T	HAT SEED OF THIS V	ARIETY BE LI	MITED AS TO NUMBER
e. x Exhibit E. Statement of the B	asis of the Owner's Owners	ship		SENERATIONS?			•
f. X Voucher Sample (2,500 viable verification that tissue culture				TYES		□по	
repository)	Tim be deposited and main	·		ES" TO ITEM 20, WHICH	CLASSES OF PROD		OND BREEDER SEED?
g. X Filing and Examination Fee (\$		Freasurer of the United		FOUNDATION	REGISTERED	_	CERTIFIED
States" (Mail to the Plant Varional AND THE VARIETY (INCLUDING AND		L) OR A HYBRID PROD		IE VARIETY OR ANY COM	PONENT OF THE VAR	RIETY PROTEC	
FROM THIS VARIETY BEEN SOLD OTHER COUNTRIES?	, DISPOSED OF, TRANSF	ERRED, OR USED IN T	THE U.S. C PRO	PERTY RIGHT (PLANT BRI	EEDER'S RIGHT OR F	PATENT)?	
	NO - As of date of origina	l application 2/20/98		XYES	MO		
IF YES, YOU MUST PROVIDE THE	•		· •	ES, GIVE COUNTRY, DAT			
FOR EACH COUNTRY AND THE Co 24. The owners declare that a viable sam for a tuber propagated variety a tissu	nple of basic seed of the va	riety will be furnished wi	ith application and wi				
The undersigned owner(s) is(are) the and is entitled to protection under the	e owner of this sexually rep	roduced or tuber propag	gated plant variety, a		ety is new, distinct, u	niform, and sta	able as required in Section 42,
Owner(s) is(are) informed that false	representation herein can j	eopardize protection and	d result in penalties.				
SIGNATURE OF OWNER SIGNATURE OF OWNER							
Wellin 1.	His						
NAME (Please print or type)			NAME (Please print	or type)			
William V. Hugie							
CAPACITY OR TITLE	DATE	1.1	CAPACITY OR TITI	.E	.,		DATE
Vice President/Director of Research							

Instructions

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), ALL of the following items must be received in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to reproduce the variety, or for tuber reproduced varieties verification that a viable (in the sense that it will reproduce an entire plant) tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for \$2,705 (\$320 filing fee and \$2,385 examination fee), payable to "Treasurer of the United States" (See Section 97.6 of the Regulations and Rules of Practice.) Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfiled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 500, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initiated and dated. DO NOT use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check paybable to "Treasurer of the United States" in the amount of \$320 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

> Plant Variety Protection Office Telephone: (301) 504-5518 FAX: (301) 504-5291

Homepage: http://www.ams.usda.gov/science/pvpo/pvp.htm

ITEM

- 18a. Give:
- (1) the genealogy, including public and commercial varieites, lines, or clones used, and the breeding method
- (2) the details of subsequent stages of selection and multiplication;
- (3) evidence of uniformity and stability; and
- (4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 18b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of realted varieties:
 - (1) Identify these varieties and state all differences objectively;
 - (2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
 - (3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.
- 18c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.
- 18d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 18e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
- If "Yes" is specified (seed of this variety be sold by variety name only, as a class of certified seed), the applicant MAY NOT reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (See Regulations and Rules of Practice, Secion 97.103).
- 22. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
- 23. See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.
- CONTINUED FROM FRONT (Please provide a statement as to the limitation and sequence of generations that may be certified.)
- CONTINUED FROM FRONT (Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)
- 23. CONTINUED FROM FRONT (Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)

Soy bean ROUNDUP READY cotton: (bt: 11/29/2002 per applicant's permission)
These seeds are covered under U.S. Patents 5,633,435; 5,352,605; 5,530,196; 5,188,642; 4,940,835; 5,717,084; 5,728,925; and 5,804,425.

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. There is no charge for filing a change of address. The fee for filing a change of ownership or assignment or any modification of owner's name is specified in Section 97.175 of the regulations. (See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)

To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority. For example, for agricultural and vegetable crops, contact: Seed Branch, AMS, USDA, Room 213, Building 306, Beltsville Agricultural Research Center-East, Beltsville, MD 20705. Telephone: (301) 504-8089. http://www.ams.usda.gov/lsg/seed/ls-sd.htm

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to repond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this collection of information is (0581-0055). The time required to complete this information collection is estimated to average 1.4 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information

The U. S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, sexual orientation, or marifal or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braitle, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

S&T -470 (04-01) designed by the Plant Variety Protection Office with WordPerfect 6,0a. Replaces STD-470 (02-99) which is obsolete.

EXHIBIT A

DSPL Technology Holding Company, LLC DELTAPINE SEED'S APPLICATION FOR DP 4344 RR COT: 24 16/2003)

ORIGIN AND BREEDING HISTORY

Summer	1993	Cross 93-270 made between CM 428 and the F ₁ from P9592 x
		[(DP 415 x 2384 (2) x 40-3-2)].
Winter	1993-94	F ₁ advanced to the F ₂ under lights in Costa Rica spraying with Roundup [™] to eliminate non Roundup [™] plants.
Summer-		Printer.
Fall	1994	F ₂ advanced to the F ₄ by modified single seed descent. Each
		generation sprayed with Roundup™ to eliminate Roundup™ susceptible plants. (Selection made based on reaction to Roundup herbicide (137:11/17/2003 F4 seed planted and F4 Roundup™ tolerant plants harvested and cion).
Winter	1994-95	F ₄ seed planted and F ₄ Roundup [™] tolerant plants harvested and threshed individually from cross 93-270.
Summer	1995	F ₅ plant rows grown at Scott, MS. Row 95-01867 was, selected, composited and determined to be breeding true for (AT:11/17/2003 characteristics described in "Exhibit C" of this application. There are no known variants. (No known variants were observed during this time (67:11/17)
	1996-97	95-01867 was yield tested as DPX 9743 RR. Breeder seed and Foundation seed increase was conducted in both Costa Rica and the U.S. using Roundup™ herbicide over the crop to control weeds. DPX 9743 RR increased to 5500 bushels of Foundation Seed.
	1998	DPX 9743 RR was released as DP 4344 RR.

EXHIBIT B

D&PL TechnologyHolling Company, LLC
-DELTAPINE SEED'S APPLICATION FOR DP 4344 RR
(27:2/10/2004)

NOVELTY STATEMENT

9800142

To our knowledge DP 4344 RR most resembles CM 428. Differences include but are not restricted to the following:

- 1) DP 4344 RR is tolerant to the herbicide Roundup™ whereas CM 428 is susceptible.
- 2) DP 4344 RR has tan pods and CM 428 has brown pods.

EXHIBIT C

PLANT VARIETY PROTECTION OFFICE BELTSVILLE, MARYLAND 20705

OBJECTIVE DESCRIPTION OF VARIETY SOYBEAN (Glycine max L.)

NAME OF APPLICANTISI	TEMPORARY DESIGNAT	TION VARIETY NAME
74.41 160aloo0180a1 11.47.45.4.4 4.45.4	1	
SPL Technology Holding Company, U.C.	מת כאדם עמת	DD 4244 DD
errapine seed (87:14/16/2004)	DPX 9743 RR	DP 4344 RR
ADDRESS (Street and No., or R.F.D. No., City, State, and Zio	Codel	F09 0551015
		FOR OFFICIAL USE ONLY
00 Main Street, Scott, MS 38772	**************************************	PVPO NUMBER
	•	9800142
Chaire the annual to the		
Choose the appropriate response which characterizes the in your answer is fewer than the number of boxes provide Starred characters ** ** ** ** ** ** ** ** ** ** ** ** **	III TII TOO BUTOON AN PHA Aire L	
1. SEED SHAPE:	0 0	
	ν	المراجع المتعارض والمتعارض
2 11 1	u T	
1 = Spherical (L/W, L/T, and T/W ratios = < 1.2)	1 11	
3 - Elongate (L/Tratio > 1.2; T/W - < 1.2)	2 = Spherical Flatte	ned (L/W ratio > 1.2; L/T ratio = < 1.2)
	4 " Elongete Flatter	ed (UTatio > 1.2;TM > 1.2)
SEED COAT COLOR: (Mature Seed)		
1 1 - Yellow 2 - Green 3 - Brown	4 = Black 5 = Ori	Las Maratt I
- Comme	n = ευσα , 5 = 0 8	her (Specify)
SEED COAT-LUSTER: (Mature Hand Shelled Sced)		
The state of the s		-
1 = Dutt ("Corroy 79"; "Braxton") 2 = Shiny ("Neise		
1 = Duff ("Corsoy 79"; "Braxton") 2 = Shiny ("Neba	FOY; Gasoy 171	
	- 1	
SEED SIZE: (Meture Soed)		
6 Grams per 100 seeds		
HILUM COLOR: (Mature Seed)		
		•
6 1 - Buff 2 - Yellow 3 - Brown	4 = Gray 5 = Imperfect (Black 6 - Black 7 - Other (Specify)
	£	THOUGHT ISPECTIVE
COTYLEDON COLOR: (Mature Seed)		
1 - Yellow 2 - Green		
	v t	
SEED PROTEIN PEROXIDASE ACTIVITY:		
		and the second s
1 - Low 2 - High		
·		
CEED PROTEINE COTTONIO		
SEED PROTEIN ELECTROPHORETIC BAND:		
1 - Type A (SP1*) 2 - Type B (Sp1b)	ř	,
1 - Type A (SP1 ^a) 2 - Type B (SP1 ^b)		
HYPOCOTYL COLOR:		
	•	
2 T = Green only ('Evans'; 'Davis') 2 = Green with	bronze band below cotyledors	(Woodworth's Texas)
		a management of track t
4 = Dark Purple extending to unifoliate leaves ("Hodgson";	Coker Hampton 266A*I	
		<u> </u>
LEAFLET SHAPE:		····
3		
3 1 * Lanccolate 2 * Oval 3 * Ovate	4 - Other (Specify)	

Powdery Mildew (Microsphaera diffusa)

0

Brown Stem Rot (Cephalosporium gregatum)

Stem Canker (Diaporthe phaseolorum vat. caulivora)

6

• • • • • • • • • • • • • • • • • • •	TION: -(Enter 0 = Not Tested: 1 = Susceptible: 2	"Resistant (Continued),				
→ [0]	ASES: (Continued) Stem Blight (Disporthe phaseolorum var. sojae)					
	eed Stain (Ocreaspora kikuchii)					
一	nia Root Rot (Rhizoctonia solani)		200119			
Phytoph	thora Rot (Phytophthora megasperma var. sojae)		9800142			
★ I Race 1	Race 2 Race 3	Race 4 Race 5	Race 6 , Race 7			
Race 8	Race 9 Other (Specify)	***				
VIRAL DISEA	563:	a seed of the seed	en la estada estada por de la composição d			
0 Bud Bligh	nt (Yobscco Ringspot Virus)	eta (m. 1945). Partiral de la companione				
	lossic (Bean Yellow Mossic Virus)					
* 0 Compeal	Assic (Cowpes Chlorotic Virus)					
	le (Bean Pod Mottle Virus)					
<u></u>	de (Soybean Mosaic Virus)					
NEMATODE DI						
Soybean (Cyst Nematode (Heterodera plycines)	la . 🗇	Specifyl Race 14			
	matode (HoploIsimus Colombus)	Hace 4 Other f	Specify)			
	Root Knot Nematode (Meloidogyne incognital	<u>.</u>				
	Root Knot Nematode (Meloidogyne Hapla)					
	ot Knot Nematode (Meloidogyne arenaria)					
Benilom	Nematode (Rotylenchulus reniformis)		80			
	ISEASE NOT ON FORM (Specify):					
. (7)	RESPONSES: (Enter 0 = Not Tested: 1 = Suscep	tible: 2 = Re xisti nti				
* [0] Iron Chlor	osis on Calcareous Soit					
Other (Spe	cityl					
21. INSECT REACTIO	N: (Enter 0 = Not Texted; 1 = Susceptible; 2 = R	esistanti				
0 Mexican B	ean Beetle (Epilachna varivestis)					
Potato Leaf Hopper (Emposses fabre)						
O Other (Specify)						
22. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED.						
CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY			
Plant Shape	CM 428	Seed Coat Luster	CM 428			
Leaf Shape	CM 428	Seed Size	CM 428			
Lesi Color	CM 428	Seed Shape	CM 428			
Ceal Size	CM 428	Seedling Pigmentation	<u>A</u> 4922			

21. GIVE DATA FOR SUBMITTED AND SIMILAR STANDARD VARIETY: Paind Comparison Octa

VARIETY	NO. OF	PLANT T	CM PLANT	LEAFL	ET SIZE	SEED CON	TENT	\$660 \$1ZE G/100	NO.
	HATURITY		HEIGHT	CM Midel	CM Length	X Protein	x oa	seeos	\$602\ \$EE02\
DP 4344 RR Submitted	110	2.0	76					16	
Name of		2.0	74			•		16	
Similar Variety						1			

PUBLICATIONS USEFUL AS REFERENCE AIDS FOR COMPLETING THIS FORM:

- 1. Oldwell, B.E., ed. 1973. Soybeans: Improvement, Production, and Uses. Amer. Soc. Agron. Monograph No. 16.
- 2. Buttery, B.R. and R.J. Buzzell. 1968. Peroxidase activity in seeds of soybean varieties. Crop Sci., 8: 722-725.
- 3. Hymowitt, T. 1973. Electrophoretic analysis of SBTI-A2 in the USDA soybean germplasm collection. Crop Sci., 13: 420-421.
- A. Payne, R.C. and L.F. Morris. 1976. Differentiation of soybean cultivars by seedling pigmentation patterns. J. Seed Technol. 1: 1-19.

EXHIBIT D

DLPL Technology Holding Company, LLC
-DELTAPINE-SEED'S APPLICATION FOR DP 4344 RR
(87:2/10/2003)

9800142

ADDITIONAL DESCRIPTION OF VARIETY

DP 4344 RR is an early group IV Roundup Ready^{$^{\text{M}}$} selection composited in the F₅ generation from the cross CM 428 x [P9592 x (DP 415 x 2384 (2) x 40-3-2)]. It has tall plants with white flowers, tawny pubescence and tan pods at maturity. Seeds average 2900 per pound and are dull yellow with black hila. DP 4344 RR is resistant to stem canker and some races of frogeye leaf spot. It is field tolerant to phytophthora root rot. It is susceptible to cyst and root knot nematodes.

PRODUCT SUMMARY SHEET

KEY FEATURES

7 days earlier than DP 3478
Tall growth for tough soils
Resistant to stem canker
Resistant to some races frogeye leaf spot
Susceptible to cyst and root knot nematode

PRODUCT DESCRIPTION

<u>Trait</u>	<u>Phenotype</u>
Deletive meturity	4.0
Relative maturity	4.3
Roundup Ready™	Yes
STS®	No
Flower color	White
Pubescence color	Tawny
Hilum color	Black
Podwall color	Tan
Seed size	Large - 2800 SD/LB
Seed protein	Untested
Seed oil	Untested
Peroxidase reaction	Untested
Seedcoat luster	-String Dull (2/10/2004 per applicants
Hypocotyl color	Green with bronze
Seed shape	Spherical Flattened
Leaflet size	Medium
Leaflet color	Medium Green
Canopy	`Full
Growth habit	Indeterminate
SCN race 3	Susceptible
SCN race 14	Susceptible
Common root knot	Susceptible
Peanut root knot	Susceptible
Javanese root knot	Untested
Lance nematode	Untested
Frogeye leafspot	Moderately Resistant
Sudden death	Untested
Stem canker	Resistant
Phytophthora root rot	Field Tolerant
Red crown rot	Untested
Chloride tolerance	Sensitive
SMV	Susceptible
AERIAL BLIGHT	Untested

BREEDER'S SUBJECTIVE RATINGS

Narrow rows	Very Good
Wide rows	Very Good
No-till	Very Good

Late planting Good
Early planting Very Good
Sandy Soils Good
Medium Soils Very Good
Poorly-drained soils Very Good
Shatter resistance Good

9800142

PRODUCT IDENTITY

Line selected by: Dr. Grover Shannon
Suggested name: DP 4344 RR
Former designation: DP X 9743 RR, 95-01867

Pedigree: DP 3478 X 93254
Areas of adaptation: From I 40 And North

Replace: New Product
Complement: DP 3478

Main competition: Asgrow RR and Pioneer RR

Most similar line: DP3456

YIELD HISTORY

Finished 33 out of 36 because it was so early and it had shattered before harvest. There were several much later varieties in the same test.

KNOWN WEAKNESSES

Needs better seed holding Susceptible to nematodes

Tall growth will cause lodging in some environments

SEED STOCK STATUS

There are about 4500 units of DP 4344 RR seed for sale in 1997.

ADDITIONAL DESCRIPTION

DP 4344 RR is an early group IV F_4 roundup ready selection composited in the F_5 generation from the cross DP 3478 X [P9592 X (DP 415 X 2384 (2) X 40-3-2)]. It has tall plants with white flowers, tawny pubescence and tan pods at maturity. Seeds are yellow with black hila averaging 2900 SD/LB. There may be up to 1% plants with either/or purple flowers, grey pubescence and hila other than black. DP 4344 RR is resistant to stem canker and some races of frogeye leaf spot. It is field tolerant to phytophthora root rot. It is susceptible to cyst and root knot nematodes.

PRODUCT PERFORMANCE

Combined data, all locations:

	YIE	ELD	<u>MAT</u> *	HGT	LDG	
	<u>bu/ac</u>	%YLD				
DP 3478	51.7	100	0	29	2.0	
DP 4750 RR	50.6	98	+2	31	1.8	
DP 4344 RR	42.8	83	-6	30	2.0	0.000 + 46
			- , , <u></u>			9800142
Locations	9	9	3	7	7	

^{* -} indicates days earlier and + indicates days later than DP 3478

Midsouth data

Midsouth, all locations

•	YIELD		MAT^*	HGT	LDG
	<u>bu/ac</u>	%YLD			
DP 3478	45.7	100	0	29	2.0
DP 4750 RR	44.4	97	+2	31	1.8
DP 4344 RR	36.0	79	-6	30	2.0
Locations	7	7	3	7	7

^{* -} indicates days earlier and + indicates days later than DP 3478

Midsouth, by state:

	YI	ELD	<u>AR</u>	LA	MS	TN	<u>TX</u>
	<u>bu/ac</u>	%YLD					
DP 3478	45.7	100	30.0	43.5	58.8	50.0	36.0
DP 4750 RR	44.4	97	36.0	36.0	59.0	48.0	37.0
DP 4344 RR	36.0	79	25.0	33.5	47.5	41.0	26.0
				·			
Locations	7	7	1	2	2	1	1

PRODUCT PERFORMANCE

Southeast data:

Southeast,	all locations:

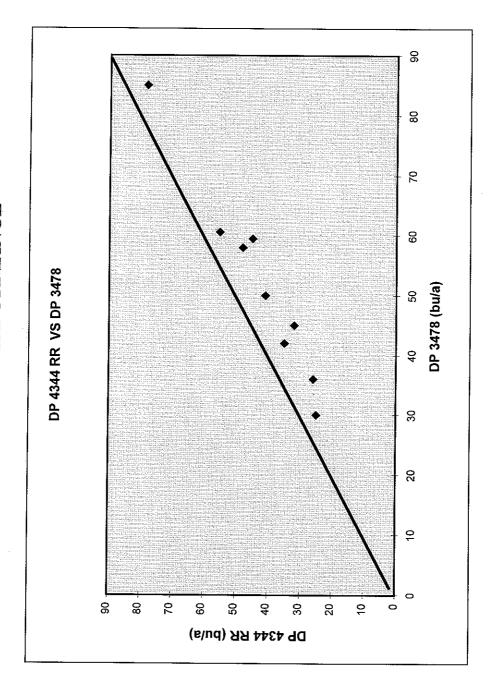
110	YIELD		
	bu/ac	%YLD	
DP 3478	72.8	100	
DP 4750 RR	72.4	99	
DP 4344 RR	66.7	92	
Locations	2	2	

9800142

Southeast, by state:

	YIELD		NC
	<u>bu/ac</u>	%YLD	
DP 3478	72.8	100	72.8
DP 4750 RR	72.4	99	72.4
DP 4344 RR	66.7	92	66.7
Locations	2	2	2

DP 4344 RR PRODUCT PERFORMANCE



This scattergram illustrates head-to-head performance of DP 4344 RR compared to DP 3478. In nine comparisons, DP 4344 RR did not outyield DP 3478.

-DP 4344 RR-

DISEASE REACTION DOCUMENTATION

Soybean Cyst Nematode (Heterodera glycines)

Data from Dr. Lawrence Young, USDA, Jackson, Tennessee 1997

<u>Line</u>	Race 3 Score 1997	Race 14 Score 1997	:	9800142
DP 4344 RR	4.7	4.7		
DP 4750 RR	4.8	5.0		
RES. CHK	1.0	3.2		
SUS. CHK	5.0	4.9		

Scale: 1= 0 to 5 females/plant, 2= 6 to 10, 3= 11 to 20, 4 = 21-40, 5 = more than 40 females/plant

Root Knot Nematode (Meloidogyne incognita and M. arenaria)

Data from Dr. Robert Kinloch, University of Florida, Jay, Florida 1997

	M.I.	M.A.
	Score	Score
<u>Line</u>	<u>1997</u>	<u>1997</u>
DP 4344 RR	3.5	5.0
DP 4344 RR DP 4750 RR	3.5 4.0	5.0 5.0

Scale: 1=no galling, 5=very severe galling

Stem Canker (Diaporthe phaseolorum (Cooke & Ellis) Sacc. f. sp. meridionalis (Morgan-Jones)

Data from Dr. Grover Shannon, Deltapine Seed, Scott, Mississippi 1997

<u>Line</u>	<u>1997</u>
DP 4344 RR	1.0
DP 4750 RR	1.0
RES. CHK	1.0
SUS. CHK	5.0

Scale: 1=no disease, 5=very severe

DISEASE REACTION DOCUMENTATION

FROGEYE LEAF SPOT

DP 4344 RR has shown some resistant to frogeye leaf spot based on limited observations.

SUDDEN DEATH SYNDROME

DP 4344 RR is untested against sudden death syndrome.

AERIAL BLIGHT

DP 4344 RR is untested to aerial blight.

9800142

HERBICIDE TOLERANCE

DP 4344 RR has no known sensitivity to common soybean herbicides used according to the label. However it is untested against the herbicide Authority.

CHLORIDE TOLERANCE

DP 4344 RR reaction to high chloride is unknown.

SEED STOCK

There are approximately 4500 units of commercial seed of DP 4344 RR.

REPRODUCE LOCALLY. Include form number and edition date on all	reproductions.	ORM APPROVED - OMB No. 0581-005	
U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE EXHIBIT E	Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). The information is held confidential until the certificate is issued (7 U.S.C. 2426).		
STATEMENT OF THE BASIS OF OWNERSHIP 1. NAME OF APPLICANT(S) COMPANY LLC D&PL TECHNOLOGY HOLDING CORP (2/19/2004 BT)	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME DP 4344 RR	
ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country)	DPX 9743 RR 5. TELEPHONE (Include area code)	6. FAX (Include area code)	
P.O. BOX 157 SCOTT, MISSISSIPPI 38772	662.742.4141 7. PVPO NUMBER	662.742.3182	
	9800142		
8. Does the applicant own all rights to the variety? Mark an "X" in the	e appropriate block. If no, please explai	in. YES NO	
9. Is the applicant (individual or company) a U.S. national or a U.S. ba	ased company? If no, give name of co	ountry. YES NO	
10. Is the applicant the original owner?	NO If no, please answer <u>one</u> o	of the following:	
a. If the original rights to variety were owned by individual(s), is (a YES b. If the original rights to variety were owned by a company(ies), YES The original rights to variety were owned by a company (ies), YES The original rights to variety were owned by a company (ies), YES The original rights to variety were owned by a company (ies), YES	is (are) the original owner(s) a U.S. bas	sed company?	
11. Additional explanation on ownership (If needed, use the reverse for DP 4344 RR contains a proprietary gene, paten which encodes a protein which provides tolerar	ted by the Monsanto Compa		
PLEASE NOTE:		- PARAMETER VINE	
Plant variety protection can only be afforded to the owners (not license			
If the rights to the variety are owned by the original breeder, that pe national of a country which affords similar protection to nationals of	erson must be a U.S. national, national o the U.S. for the same genus and specie	ıf a UPOV member country, or ੩s.	
If the rights to the variety are owned by the company which employs nationals of a UPOV member country, or owned by nationals of a co- genus and species.	ed the original breeder(s), the company ountry which affords similar protection to	must be U.S. based, owned by nationals of the U.S. for the same	
3. If the applicant is an owner who is not the original owner, both the o	riginal owner and the applicant must me	eet one of the above criteria.	
The original breeder/owner may be the individual or company who dire Act for definitions.	ected the final breeding. See Section 41	I(a)(2) ot the Plant Variety Protection	

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